

REMARKS

The present application has been reviewed in light of the non-final Office Action dated June 23, 2008. Claims 5, 6 and 8-11 are pending, with claims 10 and 11 being in independent form.

Claims 5, 6 and 8-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,196,928 to Karasawa et al., (hereinafter “Karasawa”) in view of U.S. Patent No. 4,816,909 to Kimura et al., (hereinafter “Kimura”) and U.S. Patent No. 6,466,256 to Takahashi et al., (hereinafter “Takahashi”).

Applicants have carefully reviewed the Examiner’s comments and the cited art, and respectfully submit that independent claims 10 and 11 are patentable over the cited art for at least the following reasons.

Independent claims 10 and 11 are substantially equivalent in scope and subject matter to the scope and subject matter of previously cancelled claims 4 and 7, respectively, but are in a form to clarify the arrangement of claim elements with respect to an image processing unit and an endoscope apparatus further comprising an image pickup system, wherein the endoscope apparatus detachably connects to the image processing unit.

For example, independent claim 10 recites that the image pickup system comprises: an image pickup element, a drive circuit, a frequency dividing circuit, a writing signal generating circuit, and a reading signal generating circuit. Furthermore, independent claim 10 recites that the image processing unit comprises: a line memory, an oscillator, and a video signal processing circuit.

Karasawa was cited in the Office Action as allegedly disclosing a drive circuit for generating and outputting a drive signal comprising a first frequency based on the number of

pixels for reading an image captured on scanning lines. Applicants note that Karasawa, column 3, lines 43-45, states that “CCD 24 is provided with a drive signal sent from a drive circuit 25a in an image processing unit 25 of a video processor 5a”. That drive circuit 25a is in image processing unit 25 and does not reside in the image pickup system is further illustrated in FIG. 2 of Karasawa.

In contrast, independent claim 10 specifically provides for an endoscope apparatus comprising an image pickup system that further comprises, *inter alia*, a drive circuit.

Therefore, Applicants respectfully submit that Karasawa fails to teach or suggest an endoscope apparatus comprising an image pickup system further comprising a drive circuit for generating and outputting a pickup drive signal to an image pickup element, as provided in independent claim 10.

Furthermore, Applicants respectfully submit that Karasawa fails to teach or suggest that the pickup drive signal generated by the drive circuit comprises a first frequency based on a first number of pixels.

The present application describes a camera control unit (CCU) that is connected with different types of endoscopes having image pickup elements with different numbers of pixels. Image pickup elements cannot be accurately driven unless the elements are applied with drive signals based on the number of horizontal pixels. Since the frequency dividing circuit is provided in the endoscope, clock signals based on the number of horizontal pixels of the image pickup elements are generated in the endoscope. Accordingly, even if a different type of endoscope is connected to the CCU, the CCU does not perform processing to generate drive signals based on the image pickup element.

The feature of a pickup drive signal comprising a first frequency based on a first number of pixels was added by the Amendment and Response Under 37 C.F.R. §1.111 filed on September 12, 2007 to now cancelled independent claim 4.

Applicants respectfully submit that Karasawa does not teach or suggest this feature now provided in independent claim 10. Kimura and Takahashi also fail to teach or suggest this feature. In fact, column 4 and FIG. 1 in newly cited Kimura, describes driving circuits 23A, 23B and 23C as residing within controlling unit 21 that is detachably connected to an electronic endoscope 11.

As acknowledged in the Office Action, Karasawa fails to disclose (a) reading a signal with a second frequency which is higher than the first frequency, and (b) the frequency dividing circuit, as provided in independent claim 10.

Kimura was cited in the Office Action as purportedly disclosing reading a signal with a second frequency which is higher than the first frequency.

Kimura, as understood by Applicants, relates to an endoscope containing or externally fitted with a color imaging device using a solid state imaging device and a signal processing device for processing a signal for the endoscope.

The cited portions of Kimura describe a frame sequential system wherein one frame memory M is used in common for storing video signals from a plurality of types of electronic endoscopes. A write-in pulse generator WR and read-out pulse generator RD are connected to the write-in and read-out terminals of the memory M. The write-in and read-out pulse generators, WR and RD, respectively, are connected to the output ends of two frequency dividers WFD and RFD, respectively. The frequency dividing ratio of the frequency dividers WFD and RFD is varied by a selecting signal obtained through an electronic type endoscope type switching

switch SW and a clock signal is divided in the frequency in response to the frequency dividing ratio.

However, Kimura fails to teach or suggest that a reading signal generating circuit is provided in the image pickup system, as recited in independent claim 10.

Takahashi was cited again in the Office Action as purportedly disclosing a frequency dividing circuit residing in the image pickup system, as provided in independent claim 10. However, the Office Action failed to address Applicants' argument made in the Amendment After Final Rejection Under 37 C.F.R. §1.116 filed April 7, 2008 with regard to Takahashi.

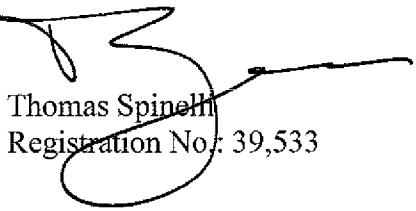
Moreover, Applicants respectfully submit that Takahashi also fails to teach or suggest that a frequency dividing circuit is comprised within an image pickup system, as provided in independent claim 10.

For the above stated reasons, Applicants respectfully submit that independent claim 10 and the claims depending therefrom are patentable over the cited art. Independent claim 11 and the claims depending therefrom are patentable over the cited art for at least similar reasons as provided above.

Accordingly, withdrawal of the rejections under 35 U.S.C. §103(a) is respectfully requested.

In view of the above, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,



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